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Interleukin 12 (IL12) (MEDI1191)

Last updated: December 6, 2018

Modality	Program #	Program *Indication*	Preclinical development	Phase 1	Phase 2	Phase 3 and commercial	Moderna rights
Intratumoral immuno-oncology	mRNA-2416	OX40L *Solid tumors/lymphoma Ovarian carcinoma*					Worldwide
	mRNA-2752	OX40L+IL23+IL36γ *Solid tumors/lymphoma*					Worldwide
	MEDI1191	IL12 *Solid tumors*					50-50 U.S. profit sharing; AZ to pay royalties on ex-U.S. sales

MEDI1191 has completed IND-enabling GLP toxicology studies

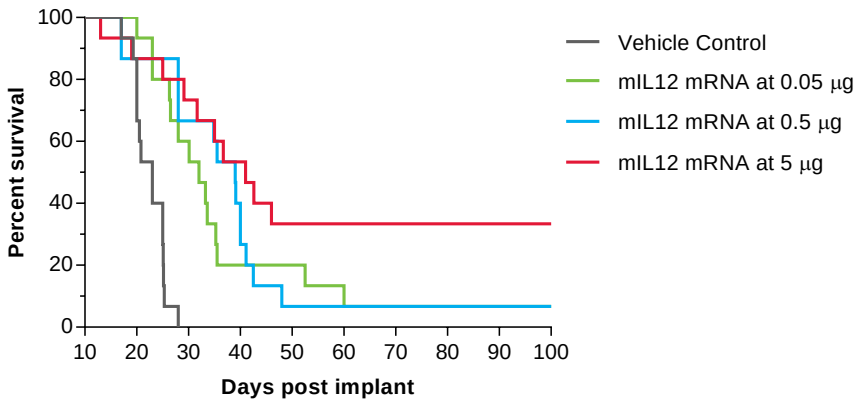
IL12 (MEDI1191) overview

Powerful immunomodulatory cytokine well-suited for local delivery

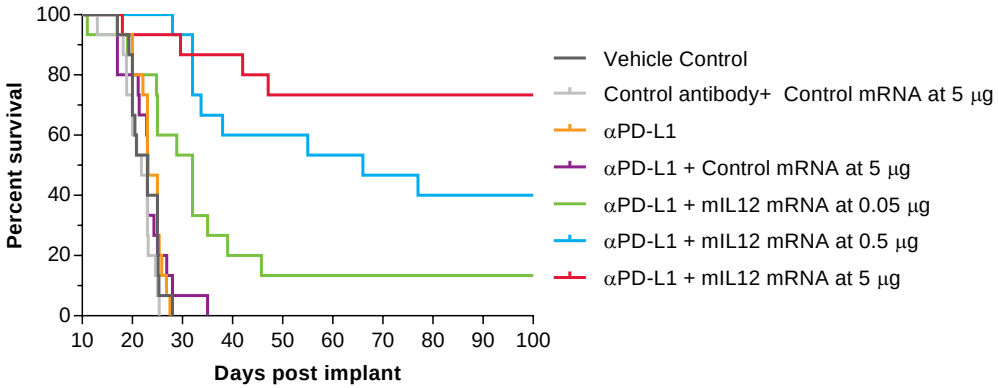
Species: **Mouse**

- IL12: potent immune modulator typically associated with a type 1 immune response and production of interferon-gamma
- Clinical development of systemically administered recombinant IL12 has been hampered by systemic toxicity
- We have demonstrated well-tolerated intratumoral doses of IL12 mRNA induce complete responses in multiple mouse models of cancer, exert abscopal effects on distal tumors, and yield protective immunity
- Clear rationale for the combination of IL12 and PD-1/PD-L1 blockade

Approximately 30% complete responders with highest dose tested for mIL12 mRNA in MC38 mouse model study



≥70% complete responders at highest tested dose for mouse IL12 mRNA with αPD-L1 antibody in MC38 mouse model study



Moderna concept: Intratumorally-administered mRNA encoding IL12 to activate tumor microenvironment

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